

20-22 warm-spell singularity. These include the presence of a warm, moist tongue of air in the lower atmosphere, passage of a cold front as suggested by a surface wind shift from persistent southerly winds prevalent during the warm spell to cooling northwesterly winds, a 500-mb. trough to the west with southwesterly winds and contour inflection point over the Tennessee area, and finally the presence of a jet stream aloft. It is suggested that in years when the singularity is especially well developed, as in January 1959, the singularity and its attendant circulation patterns at sea level and aloft provide the ingredients for the generation of severe storms in Tennessee and vicinity.

The results of this study are of value primarily as another bit of evidence dealing with the validity of a January 20-22 singularity in weather elements. Although the effect shows up more or less consistently in the long-term averages, it is not reliable enough to depend on every year. Because other sources of large variability are present, the singularity has limited value as a forecasting tool. It serves primarily to focus attention on the potential of the period.

This study was limited to an examination of the January 20-22 singularity in data for the Tennessee area in relation to the regional circulation singularity described by Wahl [1]. How the results fit into the worldwide pattern of January singularities suggested by several recent studies is a tempting question for further speculation. It is interesting to note, for example, that Brier's [6] data on hemispheric fluctuations in the meridional exchange of air at 50° N. latitude, Bowen's [7] rainfall data for a large number of stations in the Northern and Southern Hemispheres, Bigg's [8] high-level cloud data at Australian stations, and Kline and Brier's [9] freezing nuclei counts at Washington, D.C., also were peaked around January 20-24.

## REFERENCES

1. E. W. Wahl, "The January Thaw in New England—An Example of a Weather Singularity," *Bulletin of the American Meteorological Society*, vol. 33, No. 9, Nov. 1952, pp. 380-386.
2. Climatological Record Book for Nashville, Tenn., 1931-1950 (unpublished).
3. Unpublished tabulations on file at Weather Bureau Airport Station, Nashville, Tenn., prepared by N. R. Davis.
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5. U.S. Weather Bureau, Washington, D.C., (a) *Climatological Data, National Summary*, 1950-1958 annual issues; (b) *U.S. Meteorological Yearbook*, issues for 1935-1949; (c) Report of the Chief of the Weather Bureau, 1931-32 to 1933-34.
6. G. W. Brier, "A Note on Singularities," *Bulletin of the American Meteorological Society*, vol. 35, No. 8, Oct. 1954, p. 378.
7. E. G. Bowen, "The Relation Between Rainfall and Meteor Showers," *Journal of Meteorology*, vol. 13, No. 2, Apr. 1956, pp. 142-151.
8. E. K. Bigg, "January Anomalies in Cirriform Cloud Coverage over Australia," *Journal of Meteorology*, vol. 14, No. 6, Dec. 1957, pp. 524-526.
9. D. B. Kline and G. W. Brier, "A Note on Freezing Nuclei Anomalies," *Monthly Weather Review*, vol. 86, No. 9, Sept. 1958, pp. 329-333.

## NOTICE

Effective with this issue (January 1959) the 17 climatological charts ordinarily inserted at the end of each issue will be discontinued in the *Monthly Weather Review*. They will continue to be printed (in black and white) in the *Climatological Data, National Summary* which is also issued monthly.

Paid subscribers to the *Review*, who do not already receive the *Climatological Data, National Summary*, will be added to the CDNS mailing list for six months or until their present *Review* subscriptions expire, whichever is earlier. Cooperators who need the charts will be placed on the mailing list for the *Climatological Data, National Summary* upon request to Chief, U.S. Weather Bureau, Washington 25, D.C.